

January 31, 1997

Mr. Ben Wopat
Chief, Regulatory Branch
U.S. Army Corps of Engineers
St. Paul District
190 Fifth Street East
St. Paul, MN 55101-1638

RE: Crandon Mine Project: 94-01298-IP-DLB

Dear Mr. Wopat:

Mr. Jon Ahlness of your staff faxed me a copy of the January 20, 1997 letter to you from Mr. Don Moe of the Crandon Mining Company. Mr. Moe was relaying concerns to you regarding the United States Environmental Protection Agency's (EPA's) use of a watershed model, as outlined in a Position Paper dated December 16, 1996, to assist the U.S. Army Corps of Engineers (COE) in evaluating the Crandon Mine Project. Mr. Moe referred back to CMC's December 3, 1996 letter to you, specifically Attachment #2 which is a November 18, 1996 Memorandum by Foth & Van Dyke (FVD). Mr. Ahlness requested a response from EPA to CMC's concerns.

This letter will respond to the concerns raised by CMC and FVD, concentrating on EPA's data request as per EPA's August 2, 1996 Crandon Project Environmental Impact Report (EIR) comment letter and also on the points raised in the Summary Section of the FVD November 18, 1996 memorandum.

FVD's memorandum categorized the requested data, as per the August 2, 1996 EPA comment letter, into five broad categories and the memo continues to state that the extensive list of data is requested without any discussion of why the data is needed to address the EPA's study objectives or why the watershed approach is relevant to the Crandon Project. Within Part II of the data request which is an attachment to EPA's comment letter, the data request clearly states that "The following data specifications for review of the EIS for watershed/surface water impacts are requested to fulfill the following goals: The identification of possible surface water changes resulting from: Plant construction and TMA construction." EPA hopes to be able to provide needed review of surface water and associated aquatic habitat concerns and to provide additional data to the federal Environmental Impact Study (EIS) process. Unfortunately, the conceptual model that would help to narrow down specific project objectives has yet to be formulated, due in large part to CMC's delay in providing the requested information in the proper format. EPA requests only those data that CMC/FVD should have already, based on their reports within the EIR, and requested that data in electronic format that would be compatible with our software. In that electronic format, EPA would be able to avoid further delays necessitated by manual input of all the data that are available within the EIR and needed for this watershed model. EPA feels that the December 16, 1996 Position Paper makes it clear as to why the watershed approach is relevant and necessary for this project and the objectives will be narrowed further as the project proceeds.

Within the FVD Memorandum Summary, the introductory paragraph concludes that USEPA's

data requests and study approach are not appropriate to evaluate the Crandon Project EIR and potential surface water impacts. Based on misconceptions stated within the FVD memo and the absence of specific conceptual model objectives discussed above, CMC/FVD can not surmise that the watershed approach is inappropriate for this project. As stated in the Position Paper on Page 4, “The intent of the Watershed Model is not to duplicate the extensive research and efforts put into the groundwater models but to confirm, expand on and add pertinent information relating to the potential impacts to vulnerable aquatic habitats from not only the drawdown of local groundwater by the mine, but also potential effects of other mine activities such as road construction, land clearance, wetland loss, housing, etc.” In reviewing the seven summary bullets by FVD, EPA offers the following rebuttals:

- * **Use of a surface water model will not provide quantitative estimates of stream baseflow reductions due to mine dewatering and thus will not provide meaningful data upon which to estimate baseflow reduction impacts to aquatic biology.**

EPA’s Position Paper states on Page 2, “HSPF will be used in conjunction with the COE modeling effort, FEMWATER, to corroborate the MODFLOW results by CMC. The results of the FEMWATER modeling will be used as input/confirmation of the HSPF model.” As this implies, EPA will use the baseflow reductions modeled by FEMWATER as an input to the HSPF watershed model. HSPF version 12 has the capability to track changes in groundwater levels and the resulting impacts on streamflow, including baseflow. Also, in conjunction with the FEMWATER results, results from the HSPF model can assist with evaluations regarding impacts to sensitive aquatic habitats.

- * **The output from the groundwater modeling work completed by CMC, WDNR, or USCOE provide the reductions to streams, lakes, and wetlands that USEPA would likely use as an input to the surface water model. The Crandon Project EIR uses a more defensible and rigorous approach for estimating these impacts than that proposed by USEPA.**

As stated above and within the Position Paper, the EPA will be utilizing the output from FEMWATER as input for the Watershed Model. EPA’s model will expand on this data to evaluate more fully the impacts to the aquatic habitats caused by the activities associated with the mine.

- * **Assuming the mine inflow is lost from the Wolf River watershed, there will be less than a 0.5% change to the lowest recorded flow in the Wolf River. This impact is not measurable.**

The use of the Watershed Model by EPA will assist in confirming this conclusion and will take a closer look at the potential impacts to the aquatic habitats. In addition, aquatic resources other than the Wolf River could be affected by this proposed project, such as the impacts of the mine on Swamp Creek, Rice Lake and Little Sand Lake, for example. The Watershed Model will review the interactions of the entire watershed rather than one waterbody at a time.

- * **The watershed area that will be disturbed by Crandon Project facilities represents less than 0.3% of the regional watershed area that USEPA is proposing to study. Given that such a small percentage of the watershed will be disturbed, it is unreasonable to suggest that a regional watershed model is required to assess storage losses. We do not believe the USEPA watershed model has the accuracy to recognize a change of less than 0.3%.**

CMC/FVD is incorrect in their assumption that EPA will be looking at only a 397 square mile area. EPA hopes to be able to evaluate an area as large as perhaps nearly 450 square miles, but for purposes of evaluating mine impacts, is concentrating on an area approximately 40 square miles for high resolution modeling. The larger area may or may not be associated with the mine project, but may be used at a later time by the State, Tribes or others for future models or other purposes. EPA's high resolution area will be comparable to the area covered under FEMWATER and the project site incorporates approximately 3% of the study area. EPA believes that the potential impact of a project is not dependant on the size of the particular project. If a project only covers a small fraction of a study area, its associated impacts may still be great in size. The areas outside of the 40 square mile high resolution area will be evaluated at a low resolution.

- * **Stream siltation and metals transport due to runoff will be minimized by use of engineered sedimentation basins that route runoff to the facility wastewater treatment systems. The resultant impacts have been described in the EIR and are being verified by the WDNR and the USCOE.**

EPA intends to use data supplied by CMC and others to estimate the amount of erosion and siltation that will occur within the project area, due to project activities and natural occurrences. However, even though engineering methods will be used during the construction phases of the project and throughout the project life, no method is 100% effective. In a pristine area such as presently found within the project area, any change in siltation, increases in erosion, or changes in runoff patterns can have measurable impacts to sensitive aquatic habitats. As stated within the Position Paper, EPA does not wish to duplicate the efforts of other parties, but intends to utilize the Watershed Model to verify CMC's conclusions and to expand on the present data available to assist in the overall decision process for this project. EPA will seek input from all stakeholders to

minimize duplication, but in efforts to verify CMC's work, the process will undoubtedly encompass some degree of duplication, as this is a necessary part of the scientific process.

- * **Use of a surface water model cannot quantitatively evaluate air borne transport of metals and deposition in streams. Moreover this issue was discussed in the Crandon Project EIR and is under review by the WDNR.**

The Position Paper states on Page 6 that, "The watershed model results may later contribute to, but not be limited to, the evaluation of fate and transport of heavy metals due to erosion, air deposition, and surface and subsurface acid drainage." EPA does not state that HSPF will have this data as output, but that output from HSPF can be used to expand possible future air-borne metals transport and deposition models and data interpretations.

- * **The "watershed approach" advocated by the USEPA, which has been used for managing non-point pollution and guiding restoration of impacted waterways, is not an appropriate tool for evaluating potential impacts from the Crandon Project which, as a permitted and regulated facility, must adhere to specific permit requirements and environmental standards.**

EPA feels that the watershed model is an ideal tool to predict potential impacts on surface water and aquatic habitats for several reasons. First, projects of the size and scope of CMC's are potentially large sources of non-point pollution in the form of erosion, potential groundwater discharges, and runoff. Hopefully, the need to restore waterways affected by non-point source pollution would not be necessary if these impacts can be predicted and avoided in the planning

process. Second, the individual evaluation of each waterbody, as done within the EIR, does not by itself adequately depict the hydrologic system as a whole, which is needed to adequately assess potential impacts to aquatic habitats, and to Tribal and cultural resources. Third, the project is not as yet a permitted and regulated facility, and results from a study such as the watershed model, may provide insight as to appropriate permit conditions. Lastly, as stated in the Position Paper, Page 7, "With the possibilities of other mining occurring in the Upper Wolf River watershed area and in other northern Wisconsin locations in the reasonable and foreseeable future, as defined in NEPA Section 1508.7, the use of a Watershed Model is something that should be set as a precedence in order to understand potential impacts of multiple mining operations to a complex watershed."

In the closing summary paragraph, CMC/FVD referred to CMC's October 21, 1996 legal opinion stating, "the development of an entirely separate surface water study violates the Council on Environmental Quality's NEPA rules ... "which" ... mandate that the EPA 'shall cooperate with State and local agencies to the fullest extent possible' ...". EPA's Position Paper explains the NEPA justification for the use of the watershed model approach to evaluate the data provided within the Crandon Project EIR. In addition, it should be noted that because data or inputs may be duplicated as part of the verification process, this does not and should not ever imply duplication of effort, but are steps toward sound, credible and reproducible results. Further, neither the State or local agencies have trust responsibilities to the Tribes as do the EPA and other federal agencies.

As described above and as outlined within the December 16, 1996 Position Paper, EPA strongly disagrees with the opinions of CMC and FVD on the matter of the appropriateness and need of the watershed study and the use of the HSPF watershed model. Rather than continuing the exchange of lengthy correspondence in this matter, EPA proposes a meeting in the near future with COE, CMC and other interested parties, to discuss all the issues relating to the use of the watershed approach. Reiterating my previous comment, the delay in receiving the requested data has set back EPA's schedule for completion of the conceptual model, narrowing of project objectives and determination of any additional data requirements. Hopefully CMC will be able to work with EPA on this model, but if not, EPA is prepared to continue forward with input from the COE, Tribes, State and other parties.

Thank you for the opportunity to clarify EPA's stance on this important issue regarding the Crandon Mine Project.

If you have any questions regarding this letter, please feel free to contact me at (312) 886-7252 or Margaret Thielke at (312) 886-6683 (after February 17, 1997).

Sincerely,

Daniel J. Cozza, Crandon Mine Team Manager
United States Environmental Protection Agency

cc: D. Ballman, COE
M. Thielke, EPA